Amendment under 37 C.F.R. § 1.111 Attorney Docket No.: Q76819

U.S. Application No.: 10/632,830

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

## **LISTING OF CLAIMS:**

1. (original): A holographic viewing device comprising a frame and a computer-generated hologram fitted in said frame, said computer-generated hologram constructed as a

transmission Fourier transform hologram, wherein said computer-generated hologram comprises minuscule cells having pitches 8x and 8y with a reconstruction image area

defined by a range of spreading of ± first-order diffracted light of given wavelength from a diffraction

grating having grating pitches  $28_X$  and  $28_y$  that are twice as large as said pitches of cells, and an input image pattern reconstructed at said wavelength is recorded in

said computer-generated hologram in such a way that a light portion of said input image pattern overlaps a

center of said reconstruction image area.

- 2. (original): The holographic viewing device according to claim 1, wherein said computergenerated hologram comprises a phase hologram having a multivalued phase distribution.
- 3. (original): A computer-generated hologram constructed as a transmission Fourier transform hologram for a holographic viewing device, wherein said computer-generated hologram comprises minuscule cells having pitches 8,, and 8, with a

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reconstruction image area defined by a range of spreading 25 of ± first-order diffracted light of given wavelength from

a diffraction grating having grating pitches 26 and 28<sub>y</sub> that are twice as large as said pitches of cells, and an

input image pattern reconstructed at said wavelength is recorded in said computer-generated hologram in such a way that a light portion of said input image pattern overlaps a center of said reconstruction image area.

- 4. (original): The computer-generated hologram according to claim 3, which comprises a phase hologram having a multivalued phase distribution.
  - 5. (new): A holographic viewing device comprising:

a frame;

a computer generated hologram fitted in said frame;

the computer generated hologram further including:

cells having pitches  $\delta_x$  and  $\delta_y$ ;

a reconstruction image area defined by a range of spreading  $\pm$  first-order diffracted light of a given wavelength from a diffraction grating having pitches  $2\delta_x$  and  $2\delta_y$ ;

an input image pattern reconstructed at said wavelength recorded in the hologram in such a way that at least a part of a light portion of the input image overlaps a spot created by a zero order light being transmitted.

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6. (new): The holographic viewing device of claim 5, wherein said computer-generated hologram comprised a phase hologram having a multi-valued phase distribution.

7. (new): A computer generated hologram comprising:

cells having pitches  $\delta_x$  and  $\delta_y$ ;

a reconstruction image area defined by a range of spreading  $\pm$  first-order diffracted light of a given wavelength from a diffraction grating having pitches  $2\delta_x$  and  $2\delta_y$ ;

an input image pattern reconstructed at said wavelength recorded in the hologram in such a way that at least a part of a light portion of the input image overlaps a spot created by a zero order light being transmitted.

8. (new): The computer generated hologram of claim 7, wherein said computergenerated hologram comprised a phase hologram having a multi-valued phase distribution.